

VASCULAR PLANTS NEW TO KANSAS

CRAIG C. FREEMAN, c-freeman@ukans.edu

RONALD L. MCGREGOR

CALEB A. MORSE, cmorse@falcon.cc.ukans.edu

*R.L. McGregor Herbarium, Division of Botany
Natural History Museum and Biodiversity Research Center
University of Kansas, 2045 Constant Avenue
Lawrence, KS 66047-3729, U.S.A.*

Recent field and herbarium studies have yielded 37 vascular plant taxa previously undocumented in Kansas. Seventeen of these are introduced and naturalized; the others are considered native to Kansas. Notes about these taxa are provided to update distribution data contained in the *Atlas of the Flora of the Great Plains* (1977) and the *Flora of the Great Plains* (1991) and to make these data more widely available to botanists working on the *Flora of North America* project. All voucher specimens are deposited in the R.L. McGregor Herbarium (KANU), University of Kansas, unless otherwise indicated.

Acalypha deamii (Weath.) H.E. Ahles (Euphorbiaceae).—*Acalypha deamii* occurs at scattered localities from the Ohio River valley west to Kansas. It typically grows in floodplain forests along rivers and streams. Geoffrey A. Levin, Illinois Natural History Survey, discovered a single sheet among KANU specimens of *Acalypha* while annotating material for the *Flora of North America* project in 1995. The collection site, in Chase County, was visited in 1995 but no *A. deamii* was found. A population of several dozen plants was discovered the following year in east-central Shawnee Co.

Voucher specimens: KANSAS. Chase Co.: Cottonwood Falls, 6.5 mi S, wooded area along Rock Creek, moist, rich soil, 12 Sep 1975, *Stephens 88044*. Shawnee Co.: T12S, R16E, sec 1, W 1/2, Tecumseh, 0.5 mi S, 0.5 mi W, elev 880–920 ft, floodplain forest with scattered limestone outcrops along Stinson Creek between US 40 & I-70, 27 Aug 1996, *Freeman 8172*.

Alyssum desertorum Stapf var. ***desertorum*** (Brassicaceae).—This small, introduced annual is an innocuous range weed throughout much of the western U.S. (Rollins 1993). In the northern Great Plains it is encountered on disturbed prairies, along roadsides, and in waste places, especially in the High Plains (Great Plains Flora Association 1991). A single population was discovered in northwest Kansas, where plants occupy a cemetery and shoulder of an adjacent gravel road.

Voucher specimen: KANSAS. Thomas Co.: T7S, R32W, sec 28, NW 1/4, NW 1/4, Gem, 0.25 mi SW, Gem Cemetery, elev 3090 ft, mowed, upland cemetery with some remnant shortgrass prairie, 24 Apr 1996, *Freeman* 7939.

Amaranthus californicus (Moq.) S. Watson (Amaranthaceae).—A number of sheets of this species recently were discovered among KANU specimens identified as *A. blitoides* S. Watson. *Amaranthus californicus* can be distinguished from *A. blitoides* by its smaller seeds (0.8–1.1 mm diameter vs 1.2–1.7 mm diameter) and fewer (1–3 vs. 4–5), scabrous, pistillate sepals (Henrickson 1993). California pigweed is a widespread native in the western U.S. and first was reported in the Great Plains based on a 1995 collection from Dawes Co., Nebraska, by Steve Rolfsmeier. We also have vouchers from South Dakota (Shannon Co.) and Texas (Deaf Smith, Gray, and Parmer cos.)

Voucher specimens: KANSAS. Barton Co.: Great Bend, 7 mi NE, area of Cheyenne Bottoms, along dry pond shore, 15 Aug 1977, *McGregor* 30538. Morton Co.: Elkhart, 6 mi N, 3 mi W, edge of dried pool, 13 Aug 1982, *McGregor* 33603. Rush Co.: Bison, 1 mi S, bank of Sand Creek, 15 Aug 1977, *McGregor* 30541. Sherman Co.: Goodland, 9 mi S, 3 mi W, Sherman County Lake, along lake shore, 15 Aug 1983, *McGregor* 34742.

Antennaria parvifolia Nutt. (Asteraceae).—Small-leaf pussy's-toes is a common, widespread, spring ephemeral in the northern and central Great Plains (Great Plains Flora Association 1991). Earlier collections document its range in the central Great Plains south to the near the north border of Kansas. The species is added to the Kansas flora based on two collections from the northwest part of the state.

Voucher specimens: KANSAS. Norton Co.: T5S, R24W, sec 23, SE 1/4, SE 1/4, NW 1/4, Lenora, SE edge of town in Lenora Cemetery, elev 2310–2320 ft, hill above Lost Creek, overlooking the floodplain of the North Fork Solomon River, site with remnant mixed grass prairie vegetation, 8 May 1997, *Freeman* 8786; T5S, R22W, sec 8, W 1/2, NW 1/4, NE 1/4, Edmond, 1 mi N, Edmond Cemetery, elev 2220 ft, level, upland, mowed cemetery E of draw dominated by mixed grass prairie, 8 May 1997, *Freeman* 8795.

Arabis hirsuta (L.) Scop. var. *adpressipilis* (M. Hopkins) Rollins (Brassicaceae).—Two varieties of hairy rockcress occur in the Great Plains. *Arabis hirsuta* var. *pyncocarpa* (M. Hopkins) Rollins has trichomes on the stem spreading and unbranched and occurs throughout the northern Great Plains southward into central Kansas. Variety *adpressipilis*, with appressed and forked stem trichomes, barely enters the southeastern Great Plains. It is the common variety throughout Missouri (Steyermark 1977) and occurs in extreme southeast Kansas at a single locality.

Voucher specimen: KANSAS. Cherokee Co.: T34S, R25E, sec 35, NW 1/4, NE 1/4 & NE 1/4, NW 1/4, jet US 166 & KS 26, 1.5 mi N, Schermerhorn Park, elev 830–900 ft, rocky, oak-hickory forest on bluffs and uplands N of Shoal Creek, scattered along creek in NW part of park, 23 Apr 1992, *Freeman* 4323.

Armoracia lacustris (A. Gray) Al-Shehbaz & V.M. Bates (Brassicaceae).—Al-Shehbaz and Bates (1987) mapped the distribution of this aquatic pe-

renial throughout the Great Lakes region, Midwest, lower Mississippi River valley, and at other widely scattered sites in the eastern U.S. A population discovered in southeast Kansas extends the western range of the species roughly 30 kilometers. Unfortunately, it was destroyed by construction activity shortly after it was discovered.

Voucher specimen: KANSAS. Neosho Co.: just S of South Mound in shallow body of water by road near railroad, 25 Jun 1995, *Holland 8358*.

Aster lateriflorus (L.) Britton var. **lateriflorus** (Asteraceae).—This aster erroneously has been attributed to Kansas (Gates 1940; Great Plains Flora Association 1991; Gleason & Cronquist 1991) based on misidentified specimens of *A. ontariensis* Wiegand. It is fairly common in mesic forest and woodlands in Missouri (Steyermark 1977), and a population discovered during recent field studies in northeast Kansas confirms the species occurs in Kansas.

Voucher specimen: KANSAS. Leavenworth Co.: T8S, R22E, sec 15, SE 1/4, Ft. Leavenworth Military Reservation, W-central part, slopes ESE of Wagner Point, elev 900–1050 ft, mesic, oak-hickory-maple-basswood forest and small, xeric, tallgrass prairie remnants on ridge E of Sheridan Drive, 3 Oct 1995, *Freeman 7808*.

Atriplex prostrata Bouché ex DC. (Chenopodiaceae).—An examination of KANU *Artriplex* specimens by Steve Rolfsmeier, University of Nebraska, revealed *A. prostrata*, an introduced, European annual previously undocumented in Kansas. Kansas specimens all had been mistaken for *A. patula* L., which appears to be rare in the Great Plains.

Voucher specimens: KANSAS. Barton Co.: T18S, R12W, sec 9, NW 1/4, SW 1/4, Cheyenne Bottoms, pool 3, dry, flat, exposed, vegetation sparse, 18 Jul 1985, *Brooks 17543 & Laushman*. Edwards Co.: Kinsley, 2 mi E, floodplain of Arkansas River, wet, sandy soil, 5 Oct 1972, *Stephens 63220*. Ford Co.: Dodge City, 5 mi E, low bank of Arkansas River, moist, sandy soil, 18 Sep 1973, *Stephens 73993*. Gray Co.: Cimarron, 0.5 mi S, bank of Arkansas River, brushy, weedy, moist, sandy soil, 4 Aug 1971, *Stephens 50414*. Kearny Co.: Lakin, 4 mi NE, dry bottom of Lake McKinney, sandy, silty soil, 10 Aug 1975, *Stephens 87379*.

Berberis thunbergii DC. (Berberidaceae).—Japanese barberry is cultivated widely as a hedge plant and ornamental. During recent field surveys of the Ft. Leavenworth Military Reservation in northeast Kansas, widely scattered plants were encountered in open woods and mesic forests.

Voucher specimens: KANSAS. Leavenworth Co.: T8S, R22E, sec 15, SE 1/4, Ft. Leavenworth Military Reservation, W-central part, elev 900–1050 ft, mesic, upland, oak-hickory-maple-basswood forest on slopes SE of Wagner Point, steep draws with few limestone outcrops, 18 May 1995, *Freeman 7132*; T8S, R22E, sec 23, SE 1/4, Ft. Leavenworth Military Reservation, SE corner along Corral Creek, E and W along Grant Ave., elev 770–800 ft, open banks of creek and wooded riparian area immediately W of Grant Ave., 12 Oct 1995, *Freeman 7867*.

Bromus nottowayanus Fernald (Poaceae).—Nottoway brome grows in mesic forests from southern Quebec south to northern Georgia and east to eastern Texas (Pavlick 1995). It may be confused with *B. pubescens* Muhl. ex Willd., from which it is distinguished by its sericeous lower leaf sheaths

and densely pilose collars. A population of *B. nottowayanus* discovered in northeast Kansas extends its range westward from Missouri. At the site, it grows in close proximity with *B. pubescens*. However, *B. nottowayanus* is strictly confined to the narrow floodplain of a small, upland, intermittent stream in mesic, oak-hickory forest, whereas *B. pubescens* is much more widespread, occupying gentle slopes and ridges throughout the forest.

Voucher specimen: KANSAS. Leavenworth Co.: T8S, R22E, sec 11, NW 1/4, Ft. Leavenworth Military Reservation, central part ENE of Hancock Hill at Fort de Cavagnal Picnic Area, elev 860–1000 ft, mesic to dry-mesic, oak-hickory forest on hills and bluffs above Missouri River, 21 Jul 1995, *Freeman 7448*.

Calibrachoa parviflora (Juss.) D'Arcy (Solanaceae).—Streamside petunia is a prostrate annual known to occur throughout the southern U.S. and tropical America (Correll & Johnston 1970; Nee 1993), with historical collections north to Oregon (Halse 1996). A large population was discovered in central Kansas where it occurs in seasonally wet basins. This is the northernmost locality for the species in the Great Plains. It is possible that this species has been overlooked in the Great Plains due to the ephemeral nature of its habitat.

Voucher specimen: KANSAS. Barton Co.: T18S, R12W, sec 7, SW 1/4 & sec 8, E 1/2, Hoisington, 2 mi S, 5 mi W, Cheyenne Bottoms Nature Conservancy Reserve, near Rush Lake, elev 1960 ft, barren, dry basins in grazed, seasonally wet, *Paspopyrum-Distichlis* grassland, soil clayey, 17 Jun 1997, *Morse 1586 & Loring*.

Chenopodium pumilio R. Br. (Chenopodiaceae).—Ridged goosefoot is an annual plant native to Australia and reported over much of the eastern U.S., southeastern Oklahoma, much of Texas, and on the West Coast (Gleason & Cronquist 1991; Hatch et al. 1990; Wilken 1993). A central Kansas collection extends its range some 270 kilometers westward from Missouri.

Voucher specimen: KANSAS. Reno Co.: T22S, R7W, sec 10, NE 1/4, Nickerson, 9011 N Riverton Rd., common in farm yard, 1 Sep 1992, *Foster s.n.*

Digitalis lanata Ehrh. (Scrophulariaceae).—Grecian foxglove is a biennial or perennial sometimes grown as an ornamental or cultivated for the production of digitalis, a drug used as a cardiac stimulant (Moe & Farah 1975). It is a native of the Balkan Peninsula, Hungary, and Romania. In 1994 it was reported in southeast Kansas by a landowner in whose scrub-oak woodland pasture plants were very common and spreading rapidly. This is the only report of this species naturalizing and becoming noxious in North America. Since 1995, the Plant Health Division, Kansas Department of Agriculture, has been attempting to eradicate the plant, a task made difficult by the large seed bank apparently present at the site.

Voucher specimens: KANSAS. Wilson Co.: T28S, R14E, sec 7, SE 1/4, SE 1/4, Fredonia, 6 mi N, 4 mi W, sandy scrub oak pasture, common over ca 20 acres, May 1994, *Vaughn s.n.*, 27 Jun 1994, *McGregor 41110 & Russell*, 8 Jun 1995, *McGregor 41121*.

Dirca palustris L. (Thymelaeaceae).—Leatherwood grows on rocky slopes

and along floodplains in mesic, deciduous forests in the eastern U.S. and southeastern Canada. A thriving population discovered in extreme eastern Kansas extends the range of this shrub nearly 120 kilometers westward from central Missouri (Steyermark 1977). The plants first were discovered around 1990 when a site analysis was conducted and land use plans were being developed for the Overland Park Arboretum and Botanical Gardens, which now occupies the site.

Voucher specimen: KANSAS. Johnson Co.: T14S, R24E, sec 25, S 1/2, SE 1/4 & sec 26, N 1/2, NE 1/4, jct US 69 & US 169, 6 mi S, 1 mi W, Overland Park Arboretum and Botanical Gardens, elev 900–1000 ft, mesic, oak-hickory forest on NE-facing slope S of Wolf Creek and small limestone glades above steep limestone outcrops, 8 May 1998, *Freeman 10700*.

Elaeagnus umbellata Thunb. (Elaeagnaceae).—Autumn olive is an Asian species planted in the U.S. as an ornamental and for wildlife habitat. Scattered, mature plants occupy clearings and disturbed sites on the Ft. Leavenworth Military Reservation in northeast Kansas. The first collections from non-cultivated plants in Missouri were made in the late 1980s, but the species is believed to be naturalized in most Missouri counties and is a serious pest (Smith 1997).

Voucher specimen: KANSAS. Leavenworth Co.: T8S, R22E, sec 11, NW 1/4, Ft. Leavenworth Military Reservation, central part ENE of Hancock Hill at Fort de Cavaginal Picnic Area, elev 860–1000 ft, mesic to dry-mesic, oak-hickory forest on hills and bluffs above Missouri River, open, disturbed areas along roads and trails, several dozen scattered shrubs, 21 Jul 1995, *Freeman 7441*.

Elodea bifoliata H. St. John (Hydrocharitaceae).—This aquatic macrophyte, which is native to parts of the Great Plains, Rocky Mountains, and Pacific Northwest, is added to the Kansas flora based on specimens annotated in 1995 by Robert R. Haynes, University of Alabama. The three specimens originally were identified as *E. nuttallii* (Planch.) H. St. John, another member of the genus that occurs in a few, scattered localities in the state.

Voucher specimens: KANSAS. Cheyenne Co.: St. Francis, 9 mi SW, small seepage feed pool along Republican River beneath county road bridge, 5 Aug 1980, *Brooks 14822*; St. Francis, 4 mi SW, pool in South Fork Republican River, 15 Oct 1980, *McGregor 32079*; St. Francis, 3.5 mi SW, pool along South Fork Republican River, 16 Aug 1983, *McGregor 34761*.

Eragrostis pectinacea (Michx.) Nees var. ***miserrima*** (E. Fourn.) Reeder (Poaceae).—This variety (as *E. tephrosanthos* Schult.) was included in synonymy in the *Flora of the Great Plains* (Great Plains Flora Association 1991). However, following Reeder's (1986) treatment of the species, we have vouchers for var. *miserrima* from the following eastern Kansas counties: Allen, Anderson, Bourbon, Coffey, Douglas, Franklin, Jefferson, Labette, Leavenworth, Linn, Lyon, Marion, Miami, Morris, Osage, Shawnee, Wilson, and Woodson. The rangewide distribution of this variety is from Florida and the southern Gulf Coast west to southeastern Arizona and south through Mexico, Cen-

tral America, and the West Indies (Koch 1974). Variety *pectinacea*, which is widespread in the U.S., Mexico, and Central America (Koch 1974), is common statewide.

Euonymus fortunei (Turcz.) Hand.-Mazz. (Celastraceae).—This climbing shrub is a frequently planted ornamental in eastern Kansas. Large, well-established, naturalized populations along the Missouri and Wakarusa Rivers in eastern Kansas recently have come to our attention. At these sites, *E. fortunei* forms dense, spreading carpets in the understory of disturbed floodplain forests. This species has been seen at numerous other sites in eastern Kansas, most of which have not been documented by vouchers. The varietal status of these plants has not been determined.

Voucher specimens: Cherokee Co.: T35S, R35E, sec 1, SE 1/4, NE 1/4, Baxter Springs, E side, Kiwanis Park, elev 200 m, weedy bottomland forest along Spring River, 30 Aug 1998, Morse 2723. Douglas Co.: University of Kansas West Campus, woodland west of Bridwell Lab, undisturbed for over 50 years, 16 Oct 1995, McGregor 41197A, 41197B. Leavenworth Co.: T8S, R22E, sec 23, SE 1/4, Ft. Leavenworth Military Reservation, SE corner along Corral Creek, E and W of Grant Ave, open banks of creek and wooded riparian area immediately W of Grant Ave, 12 Oct 1995, Freeman 7868. Reno Co.: T25S, R8W, sec 3, NW 1/4, SE 1/4, Arlington, 0.5 mi N, 0.75 mi W, elev 1590 ft, sandy, spring-run below a spring-fed pond on the S side of the North Fork Ninnescah River, trunks of largest vines 30–40 cm in diameter, other smaller vines scattered E of pond, 13 Jul 1997, Freeman 8889.

Eupatorium purpureum L. var. *holzingeri* (Rydb.) E. Lamont (Asteraceae).—Lamont (1990; 1995) distinguished two varieties of widespread *Eupatorium purpureum* based on leaf pubescence. Variety *purpureum* has glabrous or nearly glabrous abaxial leaf surfaces and occurs throughout most of the range of the species. In var. *holzingeri*, the abaxial leaf surface is densely and persistently puberulent to villose. This variety occurs largely in the Midwest and eastern Great Plains. An examination of specimens at KANU reveals both varieties are present in Kansas, with var. *purpureum* documented only from Cherokee Co. We have vouchers for var. *holzingeri* (Rydb.) E. Lamont from the following 21 counties; Allen, Anderson, Atchison, Bourbon, Cherokee, Coffey, Crawford, Doniphan, Douglas, Franklin, Jefferson, Johnson, Labette, Linn, Leavenworth, Miami, Neosho, Osage, Shawnee, Woodson, and Wyandotte.

Leptochloa uninervia (J. Presl) Hitchc. & Chase (Poaceae).—Mexican sprangletop is added to the Kansas flora based on a single specimen annotated in 1990 by Neil Snow, Washington University. This is the only Great Plains record of this grass, which generally ranges from southern Texas south into Central and South America (Gould 1975).

Voucher specimen: KANSAS. Rice Co.: T21S, R9W, sec 21, NE 1/4, SW 1/4, Alden, 2.75 mi S, S side of Arkansas River, sandy river floodplain, open, 14 Sep 1983, Brooks 17036.

Lespedeza bicolor Turcz. (Fabaceae).—This perennial legume was introduced from Asia and now is naturalized throughout much of the southeastern U.S. (Isely 1990). A small, persistent population found in eastern Kansas extends the range of the species more than 300 kilometers from localities in eastern Missouri (Mühlenbach 1979) and northern Arkansas (Smith 1988).

Voucher specimen: KANSAS. Douglas Co.: T13S, R18E, sec 8, N 1/2, SE 1/4, W side of Clinton Reservoir, Woodridge Public Use Area, elev 1000–1010 ft, weedy, annually mowed, receded tallgrass prairie, scattered wet depressions, 16 Sep 1996, *Morse 1077*, 9 Oct 1996, *Morse 1109*.

Loeflingia squarrosa Nutt. subsp. **texana** (Hook.) Barneby & Twisselm. (Caryophyllaceae).—This diminutive, native annual grows in sandy soil from east-central Texas north to north-central Oklahoma, with widely disjunct populations in Dawes Co., Nebraska (Barneby & Twisselmann 1970) and Weston Co., Wyoming (Hartman et al. 1985). Smyth (1898) reported it from Wichita Co., Kansas, but no voucher has been located. The discovery of a population in southwest Kansas supports its inclusion in the state's flora.

Voucher specimen: KANSAS. Clark Co.: T34S, R23W, sec 35, S 1/2, Ashland, 11 mi S, 0.5 mi W, Dunne Ranch, SE part, elev 1850–1870 ft, sandy, mixed grass prairie on S side of the Cimarron River, 28 Apr 1998, *Freeman 10588*.

Lupinus argenteus Pursh var. **argenteus** (Fabaceae).—Silvery lupine is a common species on rocky, mixed grass and shortgrass prairies throughout the High Plains (Great Plains Flora Association 1977, 1991). A population found in northwest Kansas is nearly 200 kilometers from the nearest locations in western Nebraska and eastern Colorado.

Voucher specimens: KANSAS. Rawlins Co.: T5S, R35W, sec 7, E 1/2 & sec 8, W 1/2, McDonald, ca 11 mi S, 6 mi E, N-S trending draw on the S side of Beaver Creek, E of the Dewey Ranch, elev 3200–3300 ft, grazed, upland, shortgrass prairie and rocky slopes below outcrops of the Ogallala Formation, 20 Jun 1990, *Freeman 3135*, 30 May 1991, *Freeman 3522* & *Brooks*.

Malus coronaria (L.) Mill. var. **coronaria** (Rosaceae).—Wild crab apple is a low shrub or small tree of thickets and woods in the northeastern U.S. (Gleason & Cronquist 1991). A small, presumably native population was discovered in extreme eastern Kansas. This species has been documented in scattered counties in Missouri (Steyermark 1977), including Jackson and Clay, which are just east of the Kansas locality.

Voucher specimen: KANSAS. Wyandotte Co.: T11S, R25E, sec 34, NW 1/4, Roeland Park, N side of town, Rosedale Park, elev 850–950 ft, open, oak-hickory forest on predominantly N-facing slopes S of Turkey Creek, forest slightly to moderately disturbed, 4 May 1998, *Freeman 10698*.

Malus floribunda Siebold ex Van Houtte (Rosaceae).—This handsome, non-native, ornamental tree is cultivated widely in eastern Kansas. It is added

to the flora based on a collection from the east-central part of the state.

Voucher specimen: KANSAS. Douglas Co.: University of Kansas West Campus, brushy woodland SW of greenhouse, area originally an open wooded pasture, undisturbed for 45 years, 7 Apr 1995, *McGregor 41140*.

Paspalum dissectum (L.) L. (Poaceae).—This mat-forming grass grows along muddy streambanks, ditches, and the margins of ponds in the southeast U.S. and in Cuba (Gould 1975; Steyermark 1977). Populations in southeast Kansas extend the range of the species westward 120 kilometers from the nearest Missouri sites (Steyermark 1977).

Voucher specimens: KANSAS. Woodson Co.: T26S, R14E, sec 11, Woodson County State Lake, on dry lake shore flats, common, 13 Oct 1988, *McGregor 39793*; T25S, R15E, sec 15, SW 1/4, Yates Center, ca 0.25 mi SW, moist area in drained lake bed, 2 Sep 1993, *McGregor 41064*.

Polygonum cespitosum Blume var. **longisetum** (Bruijn) Steward (Polygonaceae).—This introduced, Asian annual has been reported from several localities along the Missouri River in Iowa and Nebraska (Great Plains Flora Association 1991). Mitchell and Dean (1978) report the species has spread rapidly in the U.S. since the 1940s. In recent years, populations in two northeast Kansas counties have come to our attention. In 1998, it was observed to be an abundant weed in pots and on the grounds of a plant nursery in Douglas County, Kansas.

Voucher specimens: KANSAS. Douglas Co.: Lawrence, E of Heatherwood Drive, 100 m NW of Heatherwood and 22nd Street, disturbed area behind Shannon Plaza Apartments, 23 Oct 1996, *Kaderly 15*. Leavenworth Co.: T8S, R23E, sec 18, NW 1/4, Ft. Leavenworth Military Reservation, E-central part, Missouri River floodplain, 1 mi ENE of S end of Sherman Army Airfield, elev 765 ft, open, silty river bank and mesic, floodplain forest, 3 Oct 1995, *Freeman 7779*; T8S, R22E, sec 23, SE 1/4, Ft. Leavenworth Military Reservation, SE corner along Corral Creek, E and W of Grant Avenue, open banks of creek and wooded riparian area immediately W of Grant Avenue, 12 Oct 1995, *Freeman 7864*.

Rhamnus cathartica L. (Rhamnaceae).—Common buckthorn is a European shrub or small tree cultivated in the U.S. as a hedge plant. It has become naturalized and occasionally weedy in parts of the eastern U.S. and southern Canada (Elias 1980; Smith 1997). Scattered, small trees were discovered in a disturbed forest in extreme eastern Kansas.

Voucher specimen: KANSAS. Wyandotte Co.: T11S, R25E, sec 34, NW 1/4, Roeland Park, N side of town, Rosedale Park, elev 850–950 ft, open, oak-hickory forest on predominantly N-facing slopes S of Turkey Creek, 4 May 1998, *Freeman 10677*.

Schoenoplectus californicus (C.A. Mey.) Soják (Cyperaceae).—A single specimen of California bulrush was discovered among KANU specimens of *Schoenoplectus* in 1993 by S. Galen Smith, University of Wisconsin-Whitewater, while he was annotating specimens for the *Flora of North America* project. As far as we are aware, this is the only record of this taxon in the Great Plains. It differs from other members of the *Schoenoplectus lacustris* complex (*S. tabernaemontani* (C.C. Gmel.) Palla, *S. acutus* (Muhl. ex Bigelow)

Á. Löve & D. Löve, and *S. heterochaetus* (Chase) Soják) in having bluntly trigonous culms near the inflorescence, leaf blades lacking or up to 2 mm long, strap-like floral bristles, and smooth floral scales. In the U.S., *Schoenoplectus californicus* is distributed discontinuously from the southern Atlantic Coastal Plain west to California.

Voucher specimen: KANSAS. Barber Co.: 2 mi SE of Sun City, edge of creek bank, 4 Aug 1959, *McGregor 14712*.

Shepherdia argentea (Pursh) Nutt. (Elaeagnaceae).—Smyth (1892), Hitchcock (1899), and Gates (1940) listed buffaloberry in Kansas, but we are unable to locate a voucher substantiating the historical occurrence of this species in the state. This is a common, widespread shrub in the northern half of the Great Plains. A small population in northwest Kansas confirms its presence in Kansas and extends the species' range south from Nebraska roughly 40 kilometers.

Voucher specimen: KANSAS. Rawlins Co.: T4S, R36W, sec 32, ca 8.5 mi S, 5.5 mi E of McDonald, SE-trending canyon that joins Beaver Creek to the S, elev 3100–3160 ft, grazed, upland, shortgrass prairie and canyons with extensive outcrops of the Ogallala Formation, restricted to a ca 50 yd stretch of the N bank of Beaver Creek, 19 Sep 1990, *Freeman 3248* & *Brooks*.

Sida rhombifolia L. (Malvaceae).—No other reports of this pantropical annual, which occurs sporadically in ruderal sites in the eastern U.S. (Fryxell 1985; Gleason & Cronquist 1991), are known for the Great Plains. When it was collected, the land owner reported the population had been present at least 10 years. It is not known if this population persists.

Voucher specimen: KANSAS. Shawnee Co.: Topeka, backyard of home at 1916 SW Atwood, lawn weed at edge of garden, known from the site for at least 10 years, 5 Oct 1992, *Coleman s.n.*

Stellaria pallida (Dumort.) Crép. (Caryophyllaceae).—Lesser chickweed first was reported for North America by Morton (1972), who collected it in North Carolina. Rabeler (1997) reported it for Texas and noted that it had been found in nearby southeastern states, including Arkansas and Tennessee. Our field and herbarium studies reveal this annual weed of lawns and disturbed areas occurs in 84 Kansas counties. In the past it has been misidentified as the ubiquitous *Stellaria media* (L.) Vill., common chickweed. Rabeler (1997) considered *S. pallida* to be a probable recent introduction, but specimens indicate it has been in Kansas at least 67 years. The oldest collections we have seen are deposited at the Kansas State University Herbarium (KSC): a 1931 collection from Lyon Co. and a 1946 collection from Cherokee Co.

Tridens oklahomensis (Feath.) Feath. (Poaceae).—Oklahoma tridens is a naturally occurring, sterile hybrid between *Tridens flavus* (L.) Hitchc. and *T. strictus* (Nutt.) Nash (Crooks & Kucera 1973). It currently is known from two sites in southeast Kansas, and additional field studies likely will

reveal other populations where the parent species are sympatric.

Voucher specimens: KANSAS. Labette Co.: Parsons, near the arboretum, native-like area, 2 Oct 1995, *Holland 8560*. Neosho Co.: St. Paul, 1 mi N, open pasture, growing with *Tridens strictus*, 19 Oct 1995, *Holland 8583*.

Trifolium incarnatum L. (Fabaceae).—Records of crimson clover in the Great Plains are based on infrequent escapes from plantings (Great Plains Flora Association 1991). This showy, European legume was found at a single locality in east-central Kansas where the land owner reports it has persisted for at least four years.

Voucher specimen: KANSAS. Douglas Co.: T12S, R19E, sec 21, E 1/2, SW 1/4, jct KS 10 & US 40 (W of Lawrence), 1.5 mi N, 1.5 mi E, elev 890–960 ft, disturbed, oak-hickory woodland on N-S ridge between two unnamed tributaries to Baldwin Creek, mowed path on E side of ridge, 5 May 1998, *Freeman 10699*.

Veronica biloba L. (Scrophulariaceae).—Two-lobe speedwell, an annual introduced from western Asia, has been reported in the Great Plains from ruderal sites along the Front Range of the Rocky Mountains (Great Plains Flora Association 1991) and from two recent collections in Nebraska. It is added to the Kansas list based on a collection in north-central Kansas.

Voucher specimen: KANSAS. Ottawa Co.: T11S, R4W, sec 1, SE 1/4, Minneapolis, S edge of town in Markley Grove Park, elev 1240 ft, wooded floodplain on S side of Solomon River, woods dominated by *Quercus macrocarpa*, understory mostly mowed, 6 May 1997, *Freeman 8675*.

Veronica hederifolia L. (Scrophulariaceae).—Ivy-leaf speedwell is a widely introduced, European species known from three previous collections in the Great Plains: two in Nebraska and one in South Dakota (Great Plains Flora Association 1977, 1991). Populations discovered in Lawrence, Kansas, in 1993 and 1995 are persisting.

Voucher specimens: KANSAS. Douglas Co.: T12S, R19E, sec 31, Lawrence, NW of the University of Kansas campus, W side of Emery Rd, ca 30 ft S of jct with Sigma Nu Place, disturbed, open, wooded, weedy, E-facing slope, 17 Apr 1993, *Freeman 4761*; 4 May 1993, *Freeman 4778*; T13S, R20E, sec 6, NW 1/4, NW 1/4, Lawrence, alley on W side of Tennessee just S of corner of 16th and Tennessee, dominant ground cover along alley and behind house at 1627 Tennessee, 24 Apr 1995, *Morse 203*; Clinton Lake, lawn of headquarters office, 20 Apr 1997, *McGregor 41252*. Franklin Co.: In Ottawa, lawn of city park, 19 Apr 1997, *McGregor 41250*.

Veronica persica Poir. (Scrophulariaceae).—Bird-eye speedwell is another widely introduced, European annual known from a few sites in the Great Plains. It was inadvertently omitted from the *Flora of the Great Plains* (Great Plains Flora Association 1991), although it has been documented in Iowa, Nebraska, South Dakota, and Wyoming. A 1975 collection from western Kansas went unnoticed until recently, and it is not known if the species still occurs at the site.

Voucher specimen: KANSAS. Scott Co.: Scott City, park at south edge of city, scattered in lawn, 26 Jul 1975, *McGregor 27516*.

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